

Release notes for ENDF/B Development n-054_Xe_130
evaluation

ENDF
B-VII.dev

April 26, 2017

- checkr Warnings:

1. A previous error halted parsing of the current section
MAT=5443, MF= 1, MT=451 (1): Parsing stopped

```
ERROR(S) FOUND IN MAT=5443, MF= 1, MT=451
SECTION CANNOT BE CHECKED FROM SEQUENCE NUMBER 77 TO 109
```

- checkr Errors:

1. A variable is outside the allowed ENDF range
MAT=5443, MF= 1, MT=451 (0): Variable range

```
ERROR(S) FOUND IN MAT=5443, MF= 1, MT=451
MOD = 1 OUT OF RANGE 0 - 0 RECORD NUMBER 77
```

2. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5443, MF= 2, MT=151 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5443, MF= 2, MT=151
SECTION 2/151 NOT IN DIRECTORY RECORD NUMBER 111
```

3. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5443, MF= 3, MT= 1 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5443, MF= 3, MT= 1
SECTION 3/ 1 NOT IN DIRECTORY RECORD NUMBER 137
```

4. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5443, MF= 3, MT= 2 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5443, MF= 3, MT= 2
SECTION 3/ 2 NOT IN DIRECTORY RECORD NUMBER 170
```

5. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5443, MF= 3, MT= 4 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5443, MF= 3, MT= 4
SECTION 3/ 4 NOT IN DIRECTORY RECORD NUMBER 203
```

6. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5443, MF= 3, MT= 16 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5443, MF= 3, MT= 16
SECTION 3/ 16 NOT IN DIRECTORY RECORD NUMBER 226
```

7. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5443, MF= 3, MT= 17 (0): Directory (b)

- | | | |
|---|---------------|-----|
| ERROR(S) FOUND IN MAT=5443, MF= 3, MT= 17 | RECORD NUMBER | 235 |
| SECTION 3/ 17 NOT IN DIRECTORY | | |
8. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5443, MF= 3, MT= 51 (0): Directory (b)
- | | | |
|---|---------------|-----|
| ERROR(S) FOUND IN MAT=5443, MF= 3, MT= 51 | RECORD NUMBER | 241 |
| SECTION 3/ 51 NOT IN DIRECTORY | | |
9. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5443, MF= 3, MT= 52 (0): Directory (b)
- | | | |
|---|---------------|-----|
| ERROR(S) FOUND IN MAT=5443, MF= 3, MT= 52 | RECORD NUMBER | 262 |
| SECTION 3/ 52 NOT IN DIRECTORY | | |
10. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5443, MF= 3, MT= 53 (0): Directory (b)
- | | | |
|---|---------------|-----|
| ERROR(S) FOUND IN MAT=5443, MF= 3, MT= 53 | RECORD NUMBER | 280 |
| SECTION 3/ 53 NOT IN DIRECTORY | | |
11. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5443, MF= 3, MT= 54 (0): Directory (b)
- | | | |
|---|---------------|-----|
| ERROR(S) FOUND IN MAT=5443, MF= 3, MT= 54 | RECORD NUMBER | 297 |
| SECTION 3/ 54 NOT IN DIRECTORY | | |
12. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5443, MF= 3, MT= 55 (0): Directory (b)
- | | | |
|---|---------------|-----|
| ERROR(S) FOUND IN MAT=5443, MF= 3, MT= 55 | RECORD NUMBER | 312 |
| SECTION 3/ 55 NOT IN DIRECTORY | | |
13. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5443, MF= 3, MT= 56 (0): Directory (b)
- | | | |
|---|---------------|-----|
| ERROR(S) FOUND IN MAT=5443, MF= 3, MT= 56 | RECORD NUMBER | 326 |
| SECTION 3/ 56 NOT IN DIRECTORY | | |
14. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5443, MF= 3, MT= 91 (0): Directory (b)
- | | | |
|---|---------------|-----|
| ERROR(S) FOUND IN MAT=5443, MF= 3, MT= 91 | RECORD NUMBER | 338 |
| SECTION 3/ 91 NOT IN DIRECTORY | | |
15. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5443, MF= 3, MT=102 (0): Directory (b)

- | | | | |
|--|---|---------------|-----|
| | ERROR(S) FOUND IN MAT=5443, MF= 3, MT=102 | | |
| | SECTION 3/102 NOT IN DIRECTORY | RECORD NUMBER | 350 |
16. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5443, MF= 3, MT=103 (0): Directory (b)
- | | | | |
|--|---|---------------|-----|
| | ERROR(S) FOUND IN MAT=5443, MF= 3, MT=103 | | |
| | SECTION 3/103 NOT IN DIRECTORY | RECORD NUMBER | 379 |
17. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5443, MF= 3, MT=104 (0): Directory (b)
- | | | | |
|--|---|---------------|-----|
| | ERROR(S) FOUND IN MAT=5443, MF= 3, MT=104 | | |
| | SECTION 3/104 NOT IN DIRECTORY | RECORD NUMBER | 390 |
18. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5443, MF= 3, MT=105 (0): Directory (b)
- | | | | |
|--|---|---------------|-----|
| | ERROR(S) FOUND IN MAT=5443, MF= 3, MT=105 | | |
| | SECTION 3/105 NOT IN DIRECTORY | RECORD NUMBER | 398 |
19. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5443, MF= 3, MT=107 (0): Directory (b)
- | | | | |
|--|---|---------------|-----|
| | ERROR(S) FOUND IN MAT=5443, MF= 3, MT=107 | | |
| | SECTION 3/107 NOT IN DIRECTORY | RECORD NUMBER | 405 |
20. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5443, MF= 4, MT= 2 (0): Directory (b)
- | | | | |
|--|--|---------------|-----|
| | ERROR(S) FOUND IN MAT=5443, MF= 4, MT= 2 | | |
| | SECTION 4/ 2 NOT IN DIRECTORY | RECORD NUMBER | 417 |
21. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5443, MF= 4, MT= 16 (0): Directory (b)
- | | | | |
|--|---|---------------|-----|
| | ERROR(S) FOUND IN MAT=5443, MF= 4, MT= 16 | | |
| | SECTION 4/ 16 NOT IN DIRECTORY | RECORD NUMBER | 564 |
22. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5443, MF= 4, MT= 17 (0): Directory (b)
- | | | | |
|--|---|---------------|-----|
| | ERROR(S) FOUND IN MAT=5443, MF= 4, MT= 17 | | |
| | SECTION 4/ 17 NOT IN DIRECTORY | RECORD NUMBER | 575 |
23. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5443, MF= 4, MT= 51 (0): Directory (b)

- | | | |
|--|---|-------------------|
| | ERROR(S) FOUND IN MAT=5443, MF= 4, MT= 51 | |
| | SECTION 4/ 51 NOT IN DIRECTORY | RECORD NUMBER 586 |
24. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5443, MF= 4, MT= 52 (0): Directory (b)
- | | | |
|--|---|-------------------|
| | ERROR(S) FOUND IN MAT=5443, MF= 4, MT= 52 | |
| | SECTION 4/ 52 NOT IN DIRECTORY | RECORD NUMBER 597 |
25. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5443, MF= 4, MT= 53 (0): Directory (b)
- | | | |
|--|---|-------------------|
| | ERROR(S) FOUND IN MAT=5443, MF= 4, MT= 53 | |
| | SECTION 4/ 53 NOT IN DIRECTORY | RECORD NUMBER 608 |
26. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5443, MF= 4, MT= 54 (0): Directory (b)
- | | | |
|--|---|-------------------|
| | ERROR(S) FOUND IN MAT=5443, MF= 4, MT= 54 | |
| | SECTION 4/ 54 NOT IN DIRECTORY | RECORD NUMBER 619 |
27. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5443, MF= 4, MT= 55 (0): Directory (b)
- | | | |
|--|---|-------------------|
| | ERROR(S) FOUND IN MAT=5443, MF= 4, MT= 55 | |
| | SECTION 4/ 55 NOT IN DIRECTORY | RECORD NUMBER 630 |
28. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5443, MF= 4, MT= 56 (0): Directory (b)
- | | | |
|--|---|-------------------|
| | ERROR(S) FOUND IN MAT=5443, MF= 4, MT= 56 | |
| | SECTION 4/ 56 NOT IN DIRECTORY | RECORD NUMBER 641 |
29. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5443, MF= 4, MT= 91 (0): Directory (b)
- | | | |
|--|---|-------------------|
| | ERROR(S) FOUND IN MAT=5443, MF= 4, MT= 91 | |
| | SECTION 4/ 91 NOT IN DIRECTORY | RECORD NUMBER 652 |
30. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5443, MF= 5, MT= 16 (0): Directory (b)
- | | | |
|--|---|-------------------|
| | ERROR(S) FOUND IN MAT=5443, MF= 5, MT= 16 | |
| | SECTION 5/ 16 NOT IN DIRECTORY | RECORD NUMBER 664 |
31. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5443, MF= 5, MT= 17 (0): Directory (b)

ERROR(S) FOUND IN MAT=5443, MF= 5, MT= 17

SECTION 5/ 17 NOT IN DIRECTORY

RECORD NUMBER 674

- 32. Missing a section in directory so your directory is messed up. This error will break everything else

MAT=5443, MF= 5, MT= 91 (0): Directory (b)

ERROR(S) FOUND IN MAT=5443, MF= 5, MT= 91

SECTION 5/ 91 NOT IN DIRECTORY

RECORD NUMBER 683

- groupie Errors:

1. Very small elastic cross section found
0: Small elastic

Multi-Group and Multi-Band Parameters from ENDF/B Data (GROUPIE 2015-2)

ENDF/B Input and Output Data Filenames

ENDFB.IN

ENDFB.OUT

... [97 more lines]

- fudge-4.0 Warnings:

1. Missing a channel with a particular angular momenta combination
resonances / resolved / MultiLevelBreitWigner (Error # 0): missingResonanceChannel

WARNING: Missing a channel with angular momenta combination L = 0, J = 1.5 and S = 1.5 for "capture"

2. Potential scattering hasn't converted, you need more L's!
resonances / resolved (Error # 1): potentialScatteringNotConverged

WARNING: Potential scattering hasn't converged by L=0 at E=4000.0 eV, xs[0]/xs[0]=100.0% > 0.1%

3. Cross section does not match sum of linked reaction cross sections
crossSectionSum label 0: total (Error # 0): CS Sum.

WARNING: Cross section does not match sum of linked reaction cross sections! Max diff: 0.13%

- fudge-4.0 Errors:

1. Calculated and tabulated Q values disagree.
reaction label 8: n[multiplicity:'2'] + Xe129 (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: -8855883.824951172 eV vs -9.258e6 eV!

2. Calculated and tabulated Q values disagree.
reaction label 9: n[multiplicity:'3'] + Xe128 (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: -15764547.64472961 eV vs -1.6163e7 eV!

3. Calculated and tabulated Q values disagree.
reaction label 10: Xe131 + gamma (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: 7004576.336791992 eV vs 6.6056e6 eV!

4. Calculated and tabulated Q values disagree.
reaction label 11: H1 + I130_s (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: -1767225.854904175 eV vs -2.2097e6 eV!

5. Calculated and tabulated Q values disagree.
reaction label 12: H2 + I129_s (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: -6042989.185791016 eV vs -6.4414e6 eV!

6. Calculated and tabulated Q values disagree.
reaction label 13: H3 + I128_s (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: -8622501.894439697 eV vs -9.0237e6 eV!

7. Calculated and tabulated Q values disagree.
reaction label 14: He4 + Te127_s (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: 4445549.6693573 eV vs 4.055e6 eV!

- njoy2012 Warnings:

1. Evaluation has no unresolved resonance parameters given
unresr...calculation of unresolved resonance cross sections (0): No URR

---message from unresr---mat 5443 has no unresolved parameters
copy as is to nout

2. Evaluation has no unresolved resonance parameters given
purrr...probabalistic unresolved calculation (0): No URR

---message from purrr---mat 5443 has no unresolved parameters
copy as is to nout

3. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!
groupr...compute self-shielded group-averaged cross-sections (0): GROUPR/conver (0)

---message from conver---cannot do complete particle production for mt= 16
only mf4/mf5 provided

4. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!
groupr...compute self-shielded group-averaged cross-sections (1): GROUPR/conver (0)

---message from conver---cannot do complete particle production for mt= 17
only mf4/mf5 provided

5. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!
groupr...compute self-shielded group-averaged cross-sections (2): GROUPR/conver (0)

---message from conver---cannot do complete particle production for mt= 91
only mf4/mf5 provided